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| 10/784,325 | 02/23/2004 | Wei Du | HDM-4 | 8714 |
| 7590 Pandiscio & Pandiscio, P.C. 470 Totten Pond Road Waltham, MA 02451-1914 | | | EXAMINER COSIMANO, EDWARD R | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,325

Applicant(s)

DU, WEI

Examiner

Edward R. Cosimano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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1. When preparing this Office action the examiner considers the instant application to include:

A) the Oath/Declaration filed on 23 August 2004 which is acceptable to the examiner;

B) the Abstract filed on 23 August 2004 which is acceptable to the examiner;

C) figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 of the set of drawings containing 19 sheets of 19 figures comprising figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004 where figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 of the above set of drawings is/are acceptable to the examiner;

D) the written description as filed on 23 August 2004; and

E) the set of claims as filed on 23 August 2004.

2. Applicant's claim for the benefit of an earlier filing date pursuant to 35 U.S.C. 119(e) is acknowledged.

3. The drawings filed on 23 February 2004 are objected to because:

A) although the written description mentions a small fraction of the features of the invention that have been depicted in figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004, the written description does not provide an adequate written description of the drawings since there are features of the invention depicted in the drawings that do not have a corresponding description within the written description. In view of this, it is unclear how figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004 that depict undisclosed features of the invention would in fact aid one of ordinary skill at the time the invention was made in understanding the invention as required by 37 CFR 1.81(a). To help solve this problem, the examiner suggests the use of reference numbers in the figures and then a corresponding reference to each reference number in the written description as the number is described, note the requirements of 37 CFR 1.84(p(4,5)) and 37 CFR 1.84(q).

B) figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004 include the improper use of

shading, and/or lines and/or characters that do not provide sufficient contrast and clarity so as to permit the clear reproduction of the drawings and therefore do not conform to the requirements of 37 CFR 1.84(1) or 37 CFR 1.84(m) or 37 CFR 1.84(o) or 37 CFR 1.84(p).

C) The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the:

- (1) each of the actions performed in the method of claims 1-12;
- (2) each of the structures and functions performed in the machine of claims 13-22;
- (3) each of the actions performed in the method of claims 23-26;
- (4) each of the structures and functions performed in the machine of claims 27-28;
- (5) each of the actions performed in the method of claims 29-32;
- (6) each of the structures and functions performed in the machine of claims 33-39; and
- (7) each of the actions performed in the method of claim 40.

must be shown or the features canceled from the claims. No new matter should be entered.

3.1 Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The disclosure is objected to because of the following informalities:

A) applicant must update the application data with the current status of each reference application:

(1) note expired provisional application serial number 60/449,283 mentioned in the paragraph at page 1, lines 3-5;

Note the suggested change to this paragraph below.

B) the following errors and/or inconsistencies between the drawings filed 23 February 2004 and the written description have been noted:

(1) although the written description mentions a small fraction of the features of the invention that have been depicted in figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004, the written description does not provide an adequate written description of the drawings since there are features of the invention depicted in the drawings that do not have a corresponding description with in the written description. In view of this, it is unclear how figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19 as presented in the set of drawings filed on 23 February 2004 that depict undisclosed features of the invention would in fact aid one of ordinary skill at the time the invention was made in understanding the invention as required by 37 CFR 1.81(a). To help solve this problem, the examiner suggest the use of reference numbers in the figures and then a corresponding reference to each reference number in the written description as the number is described, note the requirements of 37 CFR 1.84(p(4,5)) and 37 CFR 1.84(q).

(2) the written description lacks a brief description of the drawings as required by 37 CFR 1.74 as well as suggested arrangement of the written description using the section headings for each of the relevant section of the written description as set forth in 37 CFR 1.77.

C) the written description fails to comply with 37 CFR 1.75(d)(1) since the written description fails to describe an invention which includes:

- (1) each of the actions performed in the method of claims 1-12;
- (2) each of the structures and functions performed in the machine of claims 13-22;
- (3) each of the actions performed in the method of claims 23-32;
- (4) each of the structures and functions performed in the machine of claims 27-28;
- (5) each of the actions performed in the method of claims 29-32;
- (6) each of the structures and functions performed in the machine of claims 33-39; and
- (7) each of the actions performed in the method of claim 40;

in regard to each of the functions that are performed by the claimed invention during the claimed process/method, and therefore the claimed subject matter lacks antecedent basis in the written description as required by 37 CFR 1.75(d)(1).

D) in view of the above objections it is suggested that the following paragraphs be amended as indicated:

- (1) at page 1, lines 3-5;

This patent application also claims benefit of ~~pending~~ expired prior U.S. Provisional Patent Application Serial No. 60/449,283, filed 02/21/03 by Wei Du for CENSUSVIEW: A GIS BASED SYSTEM FOR RAPID POPULATION ASSESSMENT IN CHES (Attorney's Docket No. HDM-4 PROV).

4.1 Appropriate correction is required.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.1 Claims 1-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5.1.1 The written description fails to comply with 37 CFR 1.75(d)(1) since the written description fails to describe an invention which includes:

- A) each of the actions performed in the method of claims 1-12;
- B) each of the structures and functions performed in the machine of claims 13-22;
- C) each of the actions performed in the method of claims 23-26;
- D) each of the structures and functions performed in the machine of claims 27-28;
- E) each of the actions performed in the method of claims 29-32;
- F) each of the structures and functions performed in the machine of claims 33-39;

and

- G) each of the actions performed in the method of claim 40;

in regard to each of the functions that are performed by the claimed invention during the claimed process/method, and therefore the claimed subject matter lacks antecedent basis in the written description as required by 37 CFR 1.75(d)(1).

5.1.2 In regard to claims 29-32 & 40, it is noted that as one of ordinary skill at the time the invention was made would fairly and reasonably interpret the language used to describe the claimed invention, the claimed invention is required to load either "satellite imagery" or "aerial imagery" in to the process of claims 29-32 & 40.

5.1.2.1 However, as one of ordinary skill at the time the invention was made would fairly and reasonably interpret the language used to describe the claimed invention then the claimed invention in claims 29, 33 & 40 is clearly required to perform the function of "demarcating dwellings in the "satellite imagery"."

5.1.2.2 In view of the fact that the claimed invention may load or input "aerial imagery" and not "satellite imagery", it would therefore be unclear to one of ordinary skill at the time the invention was made how the claimed invention could perform the required function of the claimed invention, that is the function of "demarcating dwellings in the "satellite imagery" when no "satellite imagery" has been loaded or entered in to the claimed invention.

5.1.3 In regard to claim 40, it is noted that as one of ordinary skill at the time the invention was made would fairly and reasonably interpret the language used to describe the claimed invention, the claimed invention is required to "apply a spatially stratifying sampling procedure". However, as one of ordinary skill at the time the invention was made would fairly and

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reasonably interpret the language used to describe the claimed invention then the claimed invention fails to specify to what this “spatially stratifying sampling procedure” is to be applied to as part of the claimed invention.

5.1.3.1 In view of this, it would therefore be unclear to one of ordinary skill at the time the invention was made how and to what the claimed invention would perform the required function of “applying a spatially stratifying sampling procedure”.

5.1.4 For the above reasons applicant has failed to particularly and distinctly point out what is regarded as the invention.

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.1 Claims 1-22 & 40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6.1.1 It is noted that one of ordinary skill at the time the invention was made would fairly and reasonably recognize that the disclosure presents a disclosed substantial and credible utility for the invention of:

A) process/method claims 1-12 as a process/method comprising a sequence of steps/actions to perform functions that when taken as a whole provide the useful and beneficial function of generating a “spatially-stratified random sample”;

B) machine/system/apparatus claims 13-22 as a machine comprising one or more structures to perform functions that when taken as a whole achieve the useful and beneficial function of generating a “spatially-stratified random sample”; and

C) process/method claim 40 as a process/method comprising a sequence of steps/actions to perform functions that when taken as a whole provide the useful and beneficial function of using a geographical information system to assess the population within a study area.

6.1.2 It is further noted that one of ordinary skill at the time the invention was made would fairly and reasonably recognize that as recited/implied by the claims, the invention of:

A) claims 1-12 when taken as a whole are directed to a process/method that is intended to achieve the claimed utility of generating a “spatially-stratified random sample”;

B) claims 13-22 when taken as a whole are directed to a machine that is intended to achieve the claimed utility of generating a “spatially-stratified random sample”; and

C) claim 40 when taken as a whole is directed to a process/method that is intended to achieve the claimed utility of using a geographical information system to assess the population within a study area.

6.1.3 In regard to each of the pending claims while taking each claim as a whole and interpreting the claims as the claims could fairly and reasonably be interpreted by one of ordinary skill at the time the invention was made as guided by the written description, it is noted that one of ordinary skill at the time of the invention could fairly and reasonably make the following observations in regard to the interpretation of each of the pending claims.

6.1.3.1 In regard to the recited utility of independent/base claims 1, 13 & 40, it is noted that one of ordinary skill at the time the invention was made would fairly and reasonably recognize that these claims recite a non-limiting intended field of use/utility for the invention recited as a method in claim 1 and as a machine in claim 13 that provides the functions of generating a “spatially-stratified random sample” for rapidly assessing population growth, and in claim 40 that provides the function of using a geographical information system to assess the population within a study area.

6.1.3.2 In regard to the limitations of independent/base claims 1 & 13, it is noted that as one of ordinary skill at the time the invention was made would fairly and reasonably interpret:

A) the first action performed as recited in process claim 1 or first structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of creating data/information that represents a systematic grid for a study area, where the grid is defined using grid points that for grid cells”, since as recited the data/information that is gathered/produced by the performing the recited

function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

B) the second action performed as recited in process claim 1 or second structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of creating data/information that represents a sub-grid of cells with in each of the grid cells of the systematic grid for the study area, where the sub-grid cells are identified from top to bottom and from left to right with in each grid cell”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

C) the third action performed as recited in process claim 1 action performed as recited in process claim 1 or third structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information that represents an identification of each of the sub-grid of cells that intersect the study area, where the sub-grid cells are identified from top to bottom and from left to right with in each grid cell”, since as recited the data/information that is

gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

D) the fourth action performed as recited in process claim 1 or fourth structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information that represents a listing of the identified sub-grid of cells that intersect the study area, where the listing of sub-grid cells lists the sub-grid cells in the same order as the grid cells and sub-grid cells”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

E) the fifth action performed as recited in process claim 1 or fifth structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information that represents one or more sections of the sub-lists of the identified sub-grid of cells that intersect the study area, where each section of the sub-lists have a substantially equal number of sub-grid cells and the number of sections of sub-lists equals a given number of target grid points”, since

as recited the data/information that is gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

E) the sixth action performed as recited in process claim 1 or sixth structure recited in machine claim 13 as being a positive recitation of an action in claim 1 and a structure in claim 13 that is directed to nothing more than an action in claim 1 or structure in claim 13 for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information that represents a “spatially stratified random sample” comprising a selected sub-grid cell from each section of the sub-listing of sub-grid cells”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is not positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

From the above, it is further noted that one of ordinary skill at the time the invention was made would fairly and reasonably recognize that the claimed invention fails to positively recite:

A) the use of a specific machine/process in order to perform any of the data/information gathering and/or processing functions recited as the claimed invention; or

B) that the resultant data/information that is produced by the positively recited data/information gathering and processing is required to be applied or required to be used in any manner as part of the claimed invention; or

C) a transformation of the initially gathered data/information into a different state or thing other than a different representation of the initially gathered and processed data/information.

Hence, one of ordinary skill at the time the invention was made could fairly and reasonably interpret claims 1 & 13 when taken as a whole as being directed to nothing more than a process in claim 1 and a machine in claim 13 that does not go beyond the abstract concepts of gathering and manipulating of data/information with out either: (1) performing a transformation of the collected and data/information into something other than data/information, or (2) requiring a claimed practical application of the results of the gathering and manipulation of data/information, or (3) claimed requirement that any of the recited structures or actions are present or would perform any function for any purpose not related to the manipulation of data/information, or (4) claimed requirement that any of the recited structures or actions are performed or implemented using a specific machine/process. On view of this the claimed subject matter would preempt any and all uses of the claimed invention or any and all variations of how the claimed invention may be implemented.

6.1.3.3 Regarding the additional subject matter recited as dependent claims 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21 & 22, it is noted that as one of ordinary skill at the time the invention was made would fairly and reasonably interpret the claimed subject matter as being directed to both (A) nonfunctional descriptive material that does not go beyond merely defining the nature/source of the recited data/information that is to be used when performing the recited processing; and/or (B) functional descriptive material that does not go beyond defining the nature of the steps/actions that are used when performing the recited functions of processing or gathering of data/information and hence does not alter the statutory nature of the invention recited as the invention in the base claims.

6.1.3.4 In regard to the limitations of independent/base claim 40, it is noted that as one of ordinary skill at the time the invention was made would fairly and reasonably interpret:

A) the first action performed as recited in process claim 40 as being a positive recitation of an action that is directed to nothing more than an action for performing the data/information gathering/processing function of "using an unspecified machine/process in order to perform the data/information gathering/processing function of gathering

data/information representing “satellite imagery” or “aerial imagery” and loading the gathered data/information into a machine/process that includes unspecified components”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is not positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

B) the second action performed as recited in process claim 40 as being a positive recitation of an action that is directed to nothing more than an action for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information representing a demarcation of the dwellings contained within the “satellite imagery” that has been loaded into a machine/process that includes unspecified components”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is not positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is not positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

C) the third action performed as recited in process claim 40 as being a positive recitation of an action that is directed to nothing more than an action for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information representing an application of a spatially stratifying sampling procedure with a predetermined estimate”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is positively recited as being provided as input for use by latter processing that is positively recited as being performed

either internally or externally of the recited invention; and (2) is not positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

D) the fourth action performed as recited in process claim 40 as being a positive recitation of an action that is directed to nothing more than an action for performing the data/information gathering/processing function of “using an unspecified machine/process in order to perform the data/information gathering/processing function of generating data/information representing the overall population of a study area from the results of the spatially stratifying sampling procedure”, since as recited the data/information that is gathered/produced by the performing the recited function (1) is not positively recited as being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) is not positively recited as being processed/gathered by any specific machine or process that would be interpreted by one of ordinary skill at the time the invention was made as positively performing any other function beyond the function recited as data/information gathering/processing.

From the above, it is further noted that one of ordinary skill at the time the invention was made would fairly and reasonably recognize that the claimed invention fails to positively recite:

A) the use of a specific machine/process in order to perform any of the data/information gathering and/or processing functions recited as the claimed invention; or

B) that the resultant data/information that is produced by the positively recited data/information gathering and processing is required to be applied or required to be used in any manner as part of the claimed invention; or

C) a transformation of the initially gathered data/information into a different state or thing other than a different representation of the initially gathered and processed data/information.

Hence, one of ordinary skill at the time the invention was made could fairly and reasonably interpret claim 40 when taken as a whole as being directed to nothing more than a process that

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does not go beyond the abstract concepts of gathering and manipulating of data/information with out either: (1) performing a transformation of the collected and data/information into something other than data/information, or (2) requiring a claimed practical application of the results of the gathering and manipulation of data/information, or (3) claimed requirement that any of the recited structures or actions are present or would perform any function for any purpose not related to the manipulation of data/information, or (4) claimed requirement that any of the recited structures or actions are performed or implemented using a specific machine/process. On view of this the claimed subject matter would preempt any and all uses of the claimed invention or any and all variations of how the claimed invention may be implemented.

6.1.4 In view of the above characterization of claims 1-22 & 40, it can clearly be seen that, as these claims would be fairly and reasonably interpreted by one of ordinary skill at the time the invention was made, the language used to describe the invention merely would fairly and reasonably convey to one of ordinary skill at the time the invention was made a description of an invention that does not go beyond the gathering and manipulation or processing of data/information and therefor the language used to describe the claimed invention merely sets forth the abstract ideas of collecting or gathering data/information and the transformation of the collected/gathered data/information by processing/manipulating the data/information into another representation of the collected/gathered data/information, for example transforming numbers to numbers without:

A) requiring by explicitly reciting and achieving a claimed requirement that the results of the claimed invention be tangibly used in anyway by anyone or anything in order to achieve either:

- (1) a concrete and tangible useful result; or
- (2) a concrete and tangible useful practical application of either:
 - (a) the recited mathematical processing; or
 - (b) the resultant numbers/data produced by the claimed invention;

or

B) reciting and achieving a physical transformation of one thing into something else; or

C) requiring that the claimed invention go beyond the abstract idea of gathering or manipulating data/information by requiring that the claimed invention use or be implemented by another statutory class of invention.

Such a claimed invention, that one of ordinary skill at the time the invention was made would fairly and reasonably interpret as consisting solely of data collection and processing or manipulating data/information, whether:

A) the claimed invention is drafted as a machine or process or manufacture/article; and

B) no matter how useful the claimed invention may appear one of ordinary skill at the time of the invention;

is deemed to be directed to an attempt by applicant to patent an abstract idea of collecting and processing/manipulating data/information which would preempt all uses of the claimed collecting and processing of data/information that is recited as the claimed invention and therefore as set forth by the Court the claimed invention is deemed to be directed to non-statutory subject matter, see either (A) DIAMOND v. DIEHR AND LUTTON, 209 USPQ 1 at 8 (US SupCT, 1981), citing GOTTSCHALK v BENSON ET AL., 175 USPQ 673 (US SupCT, 1972), and PARKER v FLOOK, 198 USPQ 193 (US SupCT, 1978), at pages 7-8; or (B) In re WARMERDAM, 31 USPQ2d 1745 at 1758-1759 (CAFC, 1994); or (C) STATE STREET BANK AND TRUST CO. v SIGNATURE FINANCIAL GROUP INC., 38 USPQ2d 1596 at 1602 (CAFC 1998); or (D) In re RICHMAN, 195 USPQ 340 at 344 (CCPA 1977); or (E) In re MAUCORPS, 203 USPQ 812 @ 815-816 (CCPA 1979), citing both In re JOHNSON, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978), and In re FREEMAN, 573 F.2d at 1247, 197 USPQ at 472. Note also “Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process. In practical terms, claims define nonstatutory processes if they: – consist solely of mathematical operations without some claimed practical application (i.e., executing a “mathematical algorithm”); or – simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.” MPEP 2106, 2106.01 & 2106.02.

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6.1.5 As a final note in view of In re BILSKI, 88 USPQ2d 1385 (CAFC 2008), as the Examiner has argued above, the claimed invention merely sets forth an unspecified type of machine or process or article that does not go beyond performing the function of abstractly manipulating data/information with out being tied to using any other statutory class of invention or performing a transformation from one state or thing in to another state or thing, and hence the claimed invention would in fact preempt any and all uses of the underlying principle of the claimed invention.

7. The following is a statement of reasons for the indication of allowable subject matter:

A) however, the prior art does not fairly teach or suggest in regard to claims 1 & 13 a process in claim 1 and a machine in claim 13 that provides the useful and beneficial function of using a spatially-stratified random sample to rapidly assess a population by providing actions in claim 1 and structures in claim 13 that perform at least the functions of:

(1) creating a systematic grid for a study area, where the grid is defined using a given number of target grid points;

(2) dividing each grid cell into a series of sub-grid cells that are identified from top to bottom and from left to right with in each grid cell;

(3) identifying the sub-grid of cells that intersect the study area;

(4) listing of the identified sub-grid of cells that intersect the study area in the same order/sequence as the grid cells and sub-grid cells;

(5) dividing the sub-grid lists into one or more sections, where each section of the sub-grid list has a substantially equal number of sub-grid cells and the number of sections of sub-lists equals the given number of target grid points; and

(6) obtaining a “spatially stratified random sample” by randomly selecting a sub-grid cell from each section of the sub-grid listing.

Claims 2-12, which depend from claim 1, and claims 14-22, which depend from claim 13, are allowable over the prior art for the same reason.

B) however, the prior art does not fairly teach or suggest in regard to claims 23 & 27 a process in claim 23 and a machine in claim 27 that provides the useful and beneficial

function of rapidly assess a population by providing actions in claim 23 and structures in claim 27 that perform at least the functions of:

- (1) determining a boundary of a study area;
- (2) selecting a population estimation methodology for use on the study area;
- (3) assigning field data/information collectors to areas within the study area;
- (4) collecting field data/information from the assigned field data/information collectors;
- (5) uploading/transferring the collected field data/information to a computer;
- (6) using the computer to prepare/determine a dynamic population estimate/prediction;
- (7) using the dynamic population estimate to make resource analysis calculations and geographic assignments;
- (8) uploading the determined resource analysis calculations and geographic assignments to the Internet for remote viewing; and
- (9) using the uploaded resource analysis calculations and geographic assignments to distribute supplies.

Claims 24-26, which depend from claim 23, and claim 28, which depends from claim 27, are allowable over the prior art for the same reason.

C) however, the prior art does not fairly teach or suggest in regard to claim 29 a process in claim 29 that provides the useful and beneficial function of using a spatially-stratified random sample to rapidly assess a population by providing actions in claim 29 that perform at least the functions of:

- (1) loading at least one of "satellite imagery" and "aerial imagery" of a study area into a geographical information system (GIS);
- (2) demarcating the dwellings contained within the "satellite imagery" that has been loaded into the GIS;

(3) applying a spatially stratifying sampling procedure with a predetermined estimate;

(4) simulating a distance measurement procedure based on a selected population estimate method on top of the at least one satellite imagery and aerial imagery;

(5) guiding an user to determine mouse insertion points by displaying reference lines and point based on the selected population estimation method;

(6) computing distance measurements from the insert mouse input points for the selected population estimation method;

(7) prompting the user to enter data/information in order to increase productivity for distance measurements and data/information collection; and

(8) ascertaining an overall population with in the study area based on the applied spatially stratifying sampling procedure.

Claims 30-32, which depend from claim 29, are allowable over the prior art for the same reason.

D) however, the prior art does not fairly teach or suggest in regard to claims 33 & 40 a machine in claim 33 and a process in claim 40 that provides the useful and beneficial function of using a spatially-stratified random sample to rapidly assess a population by providing structures in claim 33 and actions in claim 40 that perform at least the functions of:

(1) loading "satellite imagery" for a study area into a geographical information system (GIS);

(2) demarcating the dwellings contained with in the "satellite imagery" that has been loaded into the GIS;

(3) applying a spatially stratifying sampling procedure with a predetermined estimate; and

(4) ascertaining an overall population with in the study area based on the applied spatially stratifying sampling procedure.

Claims 33-39, which depend from claim 33, are allowable over the prior art for the same reason.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571. The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern Time).

8.1 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8.2 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC

01/17/2009

**/Edward Cosimano/
Primary Examiner Unit 2863**